



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,847	06/13/2005	Nikolai Ignatyev	MERCK-3026	5873

23599 7590 06/16/2008  
MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER
----------

DAVIS, ZINNA NORTINGTON

ART UNIT	PAPER NUMBER
----------	--------------

1625

MAIL DATE	DELIVERY MODE
-----------	---------------

06/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,847	<b>Applicant(s)</b> IGNATYEV ET AL.	
	<b>Examiner</b> Zinna Northington Davis	<b>Art Unit</b> 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/13/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Claims 1-26 are pending.
2. In the response filed April 14, 2008, Applicants have elected Group I, claims 1-18, with traverse. Applicants also identify the compound of Example 1, 1-butyl-3-methylimidazolium bis(trifluoromethyl)imide as the preferred species.
3. Based upon the response filed April 14, 2008, the restriction requirement and election of species is withdrawn. Claims 1-26 are examined as a whole.
4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-4, 8, 10-12, 14, 24, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - A. The definition of the radical, A, is confusing. For instance, A represents a hydrocarbon chain. How does A bond to X? Are there 2 hydrocarbon chains? See formula (1). Clarification is appreciated.
  - B. At claims 1, 4, 8, 10, 12, the radicals  $R^1$ ,  $R^2$  are generic and subgeneric. See the definition of halogen.
  - C. At claim 8, 11, 12, it is suggested that the term, "general", should be deleted.
  - D. At claim 14, the temperature range is generic and subgeneric which is improper.
  - E. At claim 16, it is suggested that the phrase "characterized in that" should be amended to read as "wherein".

Art Unit: 1625

F. At claim 24, is the phrase "A medicament" intended?

G. At claim 26, what radical is intended by "r-CF<sub>3</sub>"?

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-23, 25, and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Heider et al (Reference 003 which is equivalent to Reference 002, cited by applicants).

The instantly claimed salts are disclosed. At pages 1 and 2, see the compound of formula (I). The compounds are depicted below:



where

Kt is N, P, As, Sb, S or Se,

A is N, P, P(O), O, S, S(O), SO<sub>2</sub>, As, As(O), Sb or Sb(O),

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are identical or different

and are each H, halogen, substituted and/or unsubstituted alkyl C<sub>n</sub>H<sub>2n+1</sub>, substituted and/or unsubstituted alkenyl having 1–18 carbon atoms and one or more double bonds, substituted and/or unsubstituted alkynyl having 1–18 carbon atoms and one or more triple bonds, substituted and/or unsubstituted cycloalkyl C<sub>m</sub>H<sub>2m-1</sub>, mono- or polysubstituted and/or unsubstituted phenyl, substituted and/or unsubstituted heteroaryl,

Kt can be included in a cyclic or heterocyclic ring, where the ring may number from 4–8 atoms. A heterocyclic ring may include at least one atom of O, N, P, As, Sb, S, Se or combinations thereof. Exemplary rings including Kt are disclosed in U.S. Pat. No. 5,827,602, which is hereby incorporated by reference,

the groups bonded to Kt may be identical or different, where

n is 1–18, m is 3–7, k is 0–6, l is 1 or 2, x is 0 or 1, and y is 1–4.

The claims are fully met when Kt includes a heterocyclic ring. At page 2, the process is taught.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

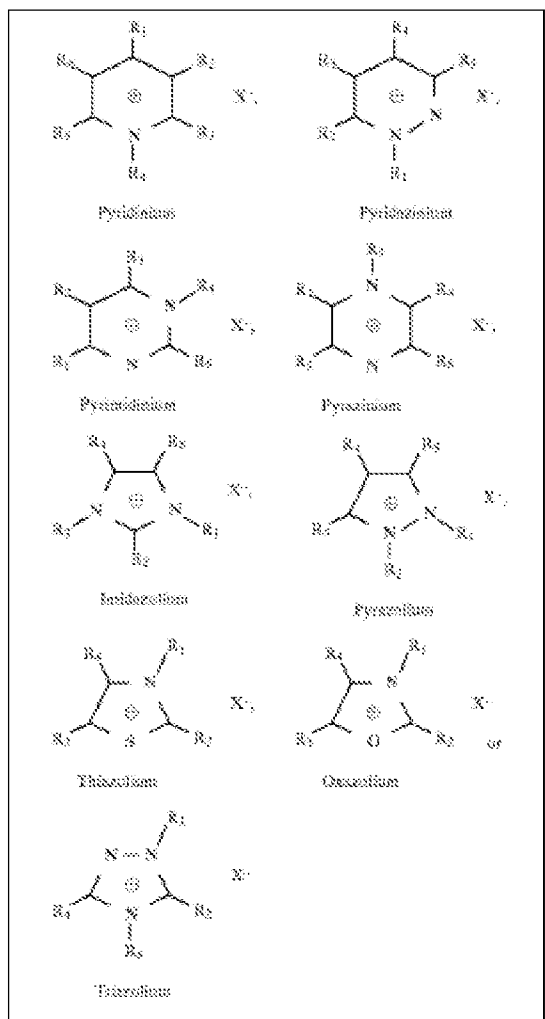
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1625

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-23 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heider et al as applied above, and further in view of Nanjundiah et al. (Reference 001, cited by applicants).

See the rejection above based upon Heider et al. The difference between the prior art compounds and the instantly claimed compounds is the heterocyclic compounds are not exemplified. Nanjundiah et al. teach a class of ionic salts. The heterocyclic compounds are disclosed. At page 2, the heterocyclic compounds are depicted below:



It would have been obvious to one of ordinary skill in the art to replace the generic heterocyclic compounds of Heider et al. with another heterocyclic moiety in view of the teaching of equivalence and the expectation of similar ionic properties. Additionally, Heider et al. incorporate the heterocyclic rings which are exemplified. Accordingly, the ionic salts are obvious variants therefrom.

10. The Information Disclosure Statements filed June 13, 2005 has been considered.

Art Unit: 1625

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zinna Northington Davis whose telephone number is 571-272-0682.
12. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.
13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Zinna Northington Davis/  
**Zinna Northington Davis**  
**Primary Examiner**  
**Art Unit 1625**